

We Claim:

1. A method of performing automated trust negotiations between first and second parties connected over a network, said method comprising the steps of:

providing each party with a set of credentials, wherein a credential provides an authorization of a property of its respective party;

classifying one or more credentials in the set of credentials for said first party as sensitive, such that they can only be disclosed to another party subject to certain predetermined criteria;

establishing negotiations over the network between said first and second parties in order to complete a desired transaction, wherein said transaction is only authorized to proceed if at least one of the parties receives certain predetermined credentials from the other party; and

transmitting at least one of the one or more sensitive credentials from the first party to the second party as part of said negotiations, subject to the first party previously receiving from the second party one or more credentials that satisfy said certain predetermined criteria;

wherein said first and second parties are a server and a client respectively, wherein said server is to perform the desired transaction in response to a request from the client;

wherein the server specifies a set of credentials that it must receive from a client in order to set up or perform the transaction;

wherein both the client and the server have one or more credentials in their respective sets of credentials which are

classified as sensitive, such that they can only be disclosed to another party subject to certain predetermined criteria;

wherein the negotiations over the network between the client and the server in order to complete a desired transaction include transmitting at least one of the one or more sensitive credentials from the client to the server as part of said negotiations, subject to the client previously receiving from the server one or more credentials that satisfy said certain predetermined criteria for the client;

wherein at least one party adopts an eager strategy, according to which all sensitive credentials are transmitted to the other party subject only to receipt of certain predetermined credentials from the other party, irrespective of whether or not transmission of such sensitive credentials is necessary in order to complete said transaction; and

wherein at least one party adopts a parsimonious strategy, according to which only selected sensitive credentials are transmitted to the other party from the set of sensitive credentials that could be transmitted after receipt of certain predetermined credentials from the other party, said selection being performed on the basis of transmitting only those sensitive credentials that are specifically necessary in order to complete said transaction.

2. The method of claim 1, wherein said first and second parties are a client and a server respectively, wherein said server is to perform the desired transaction in response to a request from the client.

3. The method of claim 2, wherein in order to set up or perform the transaction, the client is required to supply at least one of the one or more sensitive credentials to the server.

5 4. The method of claim 1, wherein said parsimonious strategy involves the exchange of credential requests to establish a point of confidence prior to transmission of credentials themselves.

10 5. The method of claim 1, wherein at least one party initially adopts an eager strategy, according to which all sensitive credentials are transmitted to the other party subject only to receipt of certain predetermined credentials from the other party, irrespective of whether or not transmission of such sensitive credentials is necessary in order to complete said transaction, and then at a later stage of said negotiations subsequently adopts a parsimonious strategy, according to which only selected sensitive credentials are transmitted to the other party from the set of sensitive credentials that could be  
20 transmitted after receipt of certain predetermined credentials from the other party, said selection being performed on the basis of transmitting only those sensitive credentials that are specifically necessary in order to complete said transaction.

25 6. The method of claim 1, wherein said server defines a service governing policy that specifies certain roles, such that said client can only set up or perform the transaction if it has

sufficient credentials to allow it to assume one of said certain roles.

7. A computer program product stored on a computer readable storage medium for, when run on a computer system, carrying out the method of claim 1.

8. A data processing apparatus for use in performing automated trust negotiations between first and second parties connected over a network, the apparatus comprising:

means for providing a party with a set of credentials, wherein a credential provides an authorization of a property of its respective party;

means for classifying one or more credentials in the set of credentials for said first party as sensitive, such that they can only be disclosed to another party subject to certain predetermined criteria;

means for establishing negotiations over the network between said first and second parties in order to complete a desired transaction, wherein said transaction is only authorized to proceed if at least one of the parties receives certain predetermined credentials from the other party; and

means for transmitting at least one of the one or more sensitive credentials from the first party to the second party as part of said negotiations, subject to the first party previously receiving from the second party one or more credentials that satisfy said certain predetermined criteria;

wherein said first and second parties are a server and a client respectively, wherein said server is to perform the desired transaction in response to a request from the client;

wherein the server specifies a set of credentials that it must receive from a client in order to set up or perform the transaction;

wherein both the client and the server have one or more credentials in their respective sets of credentials which are classified as sensitive, such that they can only be disclosed to another party subject to certain predetermined criteria;

wherein the negotiations over the network between the client and the server in order to complete a desired transaction include transmitting at least one of the one or more sensitive credentials from the client to the server as part of said negotiations, subject to the client previously receiving from the server one or more credentials that satisfy said certain predetermined criteria for the client;

wherein at least one party adopts an eager strategy, according to which all sensitive credentials are transmitted to the other party subject only to receipt of certain predetermined credentials from the other party, irrespective of whether or not transmission of such sensitive credentials is necessary in order to complete said transaction; and

wherein at least one party adopts a parsimonious strategy, according to which only selected sensitive credentials are transmitted to the other party from the set of sensitive credentials that could be transmitted after receipt of certain predetermined credentials from the other party, said selection being performed on the basis of transmitting only those sensitive credentials that are specifically necessary in order to complete said transaction.